Forest Glen Subdivision Phase VI
Soils and Drainage Report

HGM #105217
April 11, 2017

Soils

The proposed area of development is located on a ridge and adjacent slopes north of Tanglewood Drive and Misty Lane, about a mile east of Interstate 80 and a mile north of State Highway 92 in Council Bluffs, Iowa. Pre-developed land is unused grassland and timber. According to the "Soil Survey of Pottawattamie County, Iowa" conducted by the Natural Resources Conservation Service and United States Department of Agriculture, the area is composed mainly of one type of soil: Monona silt loam. This soil type occurs naturally at slopes ranging from 0-14%, with steeper slopes occurring along the drainage paths. Monona silt loam has a liquid limit of 35 to 50 percent and a plasticity index of 10 to 25. It is classified under hydrologic soil group "B" and is not subject to flooding. Monona silt loam has a moderate permeability with rates of 0.6 to 2.0 in/hr.

These soils are the same soils present in previous phases of Forest Glen. Site fill will be from foundation excavation from other phases of the subdivision and will be placed within the ROW with moisture and density control. As with other phases of Forest Glen Subdivision, structure foundations will be extended down where necessary to bear on native soil. All the various types of Silt Loams are underlain by Loess soil. Loess Soil, when compacted to high densities with correct moisture content, provides a stable base for roadway and home construction. Stabilization of the soil with cover crops as quickly as possible is required as the Loess is a highly erodible soil. The past phases of Forest Glen are an indication of the soils suitability for development.

Drainage

The proposed subdivision is located in FEMA Flood Zone "X", approximately 1.5 miles southwest of, and 150'-200' above, the watershed drainage outlet at Mosquito Creek. Most of the area being developed currently flows into a water quality feature (detention pond) that was constructed with the Phase V subdivision project, and will continue to drain to this detention pond as shown on the plan. The remaining area that does not flow into the phase V detention basin currently flows to the north and west, and will continue with that flow pattern after development.

Current plans are to design and build a storm sewer inlet and outlet pipe to drain the Misty Lane cul-de-sac. The outlet pipe for the cul-de-sac inlet will flow to the existing detention pond. The large vertical drop from the cul-de-sac to the detention pond will require a drop structure to remove energy and slow the flow velocities to acceptable rates at the outlet. Erosion control features will also be constructed at the downstream outlet.

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CITY OF COUNCIL BLUFFS - CITY PLANNING COMMISSION
LOCATION/ZONING MAP CASES # SUB-17-004

CASE #SUB-17-004 ATTACHMENT D

Map Legend

- Case #SUB-17-004: Subject Property
- Parcels

0 70 140

1 Inch = 140 Feet

2016 Aerial Photograph

Note: Subject properties are highlighted in red.

Last Amended: 4/18/17

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